


DATE: March 4, 2021

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TO: File

FROM: Woody Myers - WCR SUBJECT: Sand Valley Clubhouse and Lodge POWTS - Groundwater Evaluation Report, WPDES  
Permit # WI-0066605-01**Effluent & Groundwater Evaluation Summary**

Parameter	Unit	Current (General) Permit WI-0062901-03		Proposed (individual) Permit WI-0066605-01	
		Limit	Frequency	Limit	Frequency
Flow Rate	gpd	-	Daily	-	Daily
BOD <sub>5</sub> , Total	mg/l	-	Quarterly	-	Quarterly
Nitrogen, Organic Total	mg/l	-	Quarterly	-	Quarterly
Ammonia	mg/l	-	Quarterly	-	Quarterly
Total Dissolved Solids	mg/l	-	Quarterly	-	Quarterly
Chloride	mg/l	-	Quarterly	-	Quarterly
Total Nitrogen	mg/l	N/A	N/A	-	Quarterly

**Site Information**

The Sand Valley Clubhouse and Lodge private onsite water treatment system (POWTS) facility is located at 1697 Leopold Way, Nekoosa, Adams County. This is a private business that discharges domestic wastewater to a POWTS. Wastewater is currently discharged to groundwater via infiltration by a sub-surface land treatment system located in the NE ¼ of the SE ¼ of Section 26, T20N, R5E, Town of Rome.

**Geology**

The bedrock under this facility is the undivided Trempealeau, Tunnel City and Elk Mound Groups. The Trempealeau Group includes the Jordan and St. Lawrence Formations, the Tunnel City Group includes the Lone Rock Formation and the Elk Mound Group includes the Wonewoc, Eau Claire and Mount Simon Formations. These groups are comprised of sandstone with minor occurrences of dolomite. Bedrock is anticipated to be near or greater than 100 feet below ground surface (bgs). Surface soil primarily consists of the Plainfield sand.

**Hydrogeology**

Region groundwater is predominantly to the west northwest in this area of Adams County. The site is a little over two miles east of Petenwell Lake. There are multiple wells used for drinking water directly adjacent to this facility.

### **Land Treatment Loading Rates**

There will be one active outfall for this facility. This outfall 001 will be the discharge associated with the groundwater.

<b>Sampling Point (Outfall)</b>		
<b>Number</b>	<b>Outfall Type</b>	<b>Description</b>
Outfall 001	Land Treatment	POWT system

The facility did not submit any Discharge Monitoring Reports (DMR) so there is no indication for average flow (hydraulic loading), total nitrogen and chloride loading summations for the Land Treatment System.

### **Proposed Groundwater Monitoring Requirements**

Per ch. NR 206.10 Wis. Adm. Code groundwater monitoring systems are required for municipal and domestic wastewater discharges if the daily volume is equal to or greater than 15,000 gallons per day (gpd) average. The design flow for this system is 34,968 gpd. The facilities consultant provided a estimate for a daily average discharge of approximately 4,500 gpd.

### **Conclusions**

Given the estimated daily average flow a groundwater monitoring well system is not being recommended at this time, however if the discharge daily average increases and/or the concentration in the effluent samples is high, a groundwater monitoring system may be required.

Total nitrogen is recommended to be added to the effluent parameters required by department.